

No 32 .

32	Agricultural Industries progresses
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Agricultural Industries

Progress



Singapore

The Cultivation of Para Rubber trees in the island extensive as it was last year showed no signs of decrease, but on the contrary more and more land was cleared and planted, so that the area under cultivation is about 14,000 acres.

The direct effect of the numerous for planting this tree in every corner even in quite unsuitable ground and to call it a very small patch has caused a remarkable diminution in the supply of vegetables, fruit, poultry and even pigs as the Chinese having all divided their cultivation for rubber. The fruit crops during the last few years have been very poor probably due to the decay of the old trees and want of preparation from rain, and there are no signs of any improvement. This is particularly

noticeable in the fruit trees taken from seven to 10 years to produce a crop. There has been a little improvement in vegetable cultivation but supplies are still short.

Gaultheria has increased a little. Indigo and pine-apples have also increased a little. Grapes now are of course to the point and this has been a disappointing increase.

There formerly existed cultivation
There is a small increase in
flower cultivation Roses, Jasmynes
and Tulips, among the flowers.
The Water hyacinth is
vigorously introduced as an ornamental
plant has been found by the
Chinese to be quite suitable for
pig-feeding and is now much
used for that purpose.

There is no increase in pepper nor
Coconuts. This in the latter case is
perhaps due to the ground suitable
being already planted up. The red
variety formerly so vigorous to this
country is now to be nearly
extinct but occasionally a few
trees are killed by the black beetle.
A very successful Agricultural
Exhibition was held during the year.

[W 1]

STRAITS SETTLEMENTS.

AGRICULTURE.

1911.

CULTIVATED AND UNCULTIVATED LAND.

Settlement.	Estimated Acreage of Cultivated Land.	Estimated Acreage of Uncultivated Land.	Estimated Acreage of the Colony.	
Singapore and Islands ...	61,030	83,970	145,000	
Penang Islands ...	...	...	70,494	
Province Wellesley ...	652,741	8,005	660,746	
Penang (North East District) ...	19,152	* 10,242	29,394	Including P. Jerejak and P. Tikus.
Do. (South West District) ...	31,270	11,500	41,100	
Krian District ...	14,600	30,100	44,700	
Trans-Krian ...	9,800	1,000	10,800	
Dindings, Mainland ...	9,000	94,000	103,000	
Do., Islands ...	...	5,500	5,500	
Pulau Pangkor ...	520	5,298	5,818	
" Jerejak ...	...	...	( 886)	Included in N. E. District.
" Kindi ...	...	116	116	} Included in S. W. District.
" Rimau ...	20	63	83	
" Kra, North ...	116	224	340	
" Kra, South ...				
" Betong ...	...	8	8	Included in S. W. District.
Malacca ...	240,661	220,459	461,120	

* Including about 65 Acres of Taban, Para and Rambong planted on Crown Land at Batu Feringgi by Government.

AVERAGE RATES OF WAGES FOR LABOUR.

	SINGAPORE.		PENANG.		DINDINGS.		MALACCA.	
	Per annum.	Per day.	Per annum.	Per day.	Per annum.	Per day.	Per annum.	Per day.
	\$	Cents.	\$	Cents.	\$	Cents.	\$	Cents.
PREDIAL.								
All field labourers and gardeners are generally hired by the month, and some on longer agreements. If paid by day they get higher wages.	60 to 108	20 to 30	72 to 144; 72 to 180 (P. W.)	25 to 40 30 to 75 (P. W.)	...	40 to 60	...	30 to 45
DOMESTIC.								
Domestic servants are all engaged monthly.	72 to 180 and food.	...	96 to 216 and food. 60 to 216 (P. W.)	...	144 to 192 and food.	...	60 to 144 and food.	25 to 35
ESTATE COOLIES.								
Tamils—Free.	...	...	...	(m) 40 (f) 30	...	...	...	...
(1) Tamil on 2 years' agreement.	...	...	...	(m) 25 (f) 18	...	(m) 45 (f) 25	...	23 to 25
(2) Chinese on 1 year's agreement.	34 to 42 and food.	...	New hands, \$24 to \$30 & food; old hands, \$108 to \$180 and food. (P. W.) New hands, \$30 & food; old hands, \$108 to \$180 and food.	...	30 to 40 and food.	...	24 to 30 and food.	...
TRADES.								
Carpenters and Joiners, Blacksmiths, Bricklayers.	...	45 to 75	Only day labour.	50 to 80; 30 to 1.50 (P. W.)	Only day labour.	\$1 to \$1.30	...	60 cents to \$1.30

RETURN OF THE

Settlement.	CROPS. Nature of Crop, and Number of Acres of Land to each Crop.					STOCK. Number of	
	Nutmegs and Cloves, 80 acres.	Nutmegs and Cloves, 1 acre.	Nutmegs and Cloves, 550 acres.	Nutmegs and Cloves, 6,500 acres.	Nutmegs and Cloves, 250 acres.	1 in on-grass 150 acres. Indigo 200 acres.	Essence Grasses, Spices, Etc.
Malacca	11,920 acres. 12,550	Nil.	Pepper in patches.	Nil.	Pepper, Nil.	1,000 acres. 4,00 acres.	Gambier. Pepper.
	20 acres.	Nil.	35 acres of tea and coffee.	Nil.	Cultivated in patches for Native consumption, Nil.	Nil.	Coffee and Tea.
	80,424 acres. 11,440	About 5,000 acres.	14,725 acres. 4,500	4,110 acres.	884 acres.	29,150 acres.	Para Rubber.
	Nil.	Nil.	Nil.	Nil.	Nil.	120 acres.	Getah Percha.
	40,410 acres. 4,500	About 10 acres.	45,200 acres. 4,500	About 6,000 acres.	129 acres.	Nil.	Padi.
	47,355 acres. 6,150	About 4,000 acres.	65,692 acres.	About 12,100 acres.	17,603 acres.	29,370 acres.	Fruit trees, Coconut, Pineapple and Gardens.
	Mixed with fruits.	Mixed with fruits.	5,017 acres. 4,100	About 2,500 acres.	Mixed with fruits.	In patches. 330 acres.	Betel-nut.
	About 10,926 acres.	Mixed with Para rubber.	9,700 acres.	In patches. About 20 acres.	In patches. About 150 acres.	About 150 acres.	Tapioca.
	Only cultivated in patches.	In patches only.	5,100 acres.	In patches. About 40 acres.	31 acres in patches.	Only cultivated in patches.	Sugar-cane.
	Not ascertained.	Nil.	105,352 acres.	Nil.	105 acres.	85 acres.	Pasture.
	About 206,364 acres.	About 9,000 acres.	159,237 acres.	About 31,270 acres.	19,152 acres.	61,030 acres.	Number of Acres in Crop.
	About 126,353 acres.	About 104,800 * acres.	12,000 acres.	About 11,500 acres.	10,242 acres.	83,970 acres.	Number of Acres of Un- cultivated Land.
	760	14	445	155	701	826	Horses.
	17,896	about 300	2,825	700	2,259	20,306 (For Slaughter).	Horned Cattle.
	71	Nil.	172	Nil.	Imported and killed immediately.	29,228 (For Slaughter).	Sheep.
	3,255	about 100	5,548	1,750	743	3,615 (For Slaughter).	Goats.
	7,500	about 2,500	21,755	about 7,000	4,948	97,373 (For Slaughter).	Pigs.

* Including Forest Reserves not surveyed.

PRODUCE, STOCK, Etc.

PRODUCE.				PRICE OF PRODUCE.			
Nature and Quantity.				Nature and Price.			
Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Wheat.	Wheat.
Not ascertained.	160 to 400 Gantangs per acre.	300 to 400 Gantangs per acre.	120 to 700 Gantangs per acre.	Not ascertained.	Nil.	Padi.	Padi.
Not ascertained.	Not ascertained.	Not ascertained.	Not ascertained.	Not ascertained.	Not ascertained.	Fruit trees, Gardens.	Fruit trees, Gardens.
Not ascertained.	Not ascertained.	Not ascertained.	15,000 pikuls.	Not ascertained.	Not ascertained.	Betel-nut.	Betel-nut.
Not ascertained.	Not ascertained.	Not ascertained.	Not ascertained.	Not ascertained.	Cultivated in patches for native consumption.	Tapioca.	Tapioca.
Not ascertained.	Not ascertained.	Not ascertained.	10,054 lbs.	Nil.	20,000 acres.	Rubber.	Rubber.
Not ascertained.	Not ascertained.	Not ascertained.	Not ascertained.	Not ascertained.	Cultivated in patches for native consumption.	Sugar-cane.	Sugar-cane.
Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Tea.	Tea.
Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Wheat.	Wheat.
Varies from \$8 to \$10 per 100 gantangs. Padi land in Country, \$50; within 4 miles of Town, \$150, per acre.	\$16 per 100 gantangs.	\$9 to \$18 per 100 gantangs.	\$10 to \$19 per 100 gantangs.	\$10 to \$13 per 100 gantangs. 13 to 16 since October.	Experimental cultivation only.	Padi.	Padi.
\$500 per acre for fruit plantations near Town and coast. Less values inland and far from roads.	Durians, 30 cents. Mangostin, 10 to 12 cents for 10. Rambutan, 6 for 1 cent. Vegetables, 5 to 10 cents per Kati.	Durian, 5 to 16 cents. Mangostin, 4 to 12 cents bunch of 10. Rambutan, 6 to 25 cents per 100. Vegetables, 3 to 8 cents per Kati.	Durian, 2 to 8 cents. Mangostin, 5 to 60 cents for 100. Rambutan, 4 to 10 cents for 100. Vegetables, 3 to 8 cents per Kati. Chempedak, 1 to 3 cents each.	Durian, 3 to 20 cents. Mangostin, 2 to 8 cents. Rambutan, 5 to 50 cents per 100. Rambie, 1 to 3 cts per kati Chempedak, 4 to 12 cts. Chiku 1 to 3 cents. Vegetable 3 to 8 cents per kati.	Fruit trees, \$12 (aver. rents) per acre, Garden land, \$5 in country to \$30 near town.	Fruit trees, Gardens.	Fruit trees, Gardens.
\$2.50 to \$4 per pikul.	\$2.50 to \$3.50 per pikul.	\$3 to \$8 per pikul.	\$2.50 to \$3.50 per pikul.	\$3½ to \$4½ per pikul.	\$3 per pikul.	Betel-nut.	Betel-nut.
\$7 to \$9 per pikul.	Nil.	\$3 to \$5 per pikul.	\$4 per pikul.	\$4 to \$8 per pikul.	\$4.40 per pikul of 133 lbs., Flake, \$4.30 per pikul of 133 lbs., Flour.	Tapioca.	Tapioca.
\$3 to \$5 per 100 sticks in Town; \$30 per acre in Country.	\$2.50 per 100 canes.	\$2 to \$10 per 100 canes.	\$2 to \$4 per 100 canes.	\$4 to \$6 per 100 canes.	\$2 per 100 canes.	Sugar-cane.	Sugar-cane.
Nuts, \$33 per 1,000. Land, near Town and Sea- side, from \$100 to \$500 per acre; from \$50 to \$60 in Country.	\$40 to \$50 per 1,000. Single Nuts 4 to 5 cents.	Nuts, \$30 to \$50 per 1,000.	\$35 to \$45 per 1,000. Land, from \$300 to \$700 (aver. value) per acre.	Nuts, \$35 to \$42 per 1,000. Land, from \$400 to \$900 per acre. Land, \$150 per acre.	Nuts, \$30 per 1,000. Land, \$150 per acre.	Coconuts.	Coconuts.

RUBBER PLANTING IN PENANG AND PROVINCE WELLESLEY:—In common with the Federated Malay States great interest is being shown in planting Rubber, chiefly the Para variety, although Rambong is planted to some slight extent.

As regards Getah Taban a tree notoriously slow to mature, and therefore unsuited for private enterprise, the interest shown by Government to restrict artificially the Forest Reserves some few years ago is not so great now, owing partly to the fact that vast numbers of young seedlings have been found in the Forests Reserves of the Peninsula, thus showing that there is no fear of its extermination, which some few years ago was feared. Notwithstanding this, however, some 5,000 young trees have been planted in the Forest Reserves, which together with about 4,000 trees known to exist in a wild state, makes a total of 9,000 trees for Penang alone.

AVERAGE PRICES OF VARIOUS ARTICLES OF USE OR CONSUMPTION.

ARTICLES.	SINGAPORE.	PENANG.	DINDINGS. *	PROVINCE WELLESLEY.	MALACCA.	REMARKS.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
Fish, per Kati ...	12 to 30 cts.	8 to 35 cts.	12 to 20 cts.	5 to 45 cts.	18 to 30 cts.	
Wheaten Flour, per barrel of 196 lbs. ...	7 00	2.10 to 2.40 per bag.	...	\$8 to \$9 (per bag of 196 lbs.)	2.20 to 2.60 (per bag.)	
Rice Flour, per chupak ...	0 11	...	...	15 to 22 cts.	18 to 20 cts. (per Kati.†)	
Wheat, per Imperial bushel (80 lbs.) ...	4 00	40 to 45 cts. per gantang.‡	0 08 } per Kati. }	Nil.	0 60 per gantang. 3 and 4 cts.	
Wheaten Bread, per loaf ...	0 06	0 05	0 05°	5 cents.		
Horned Cattle ...	50 to 100 00	30 to 120 00	50 to 100 00	30 to 100 00	60 to 100 00	
Horses ...	200 to 400 00	200 to 500 00	No market.	100 to 300 00	150 to 500 00	
Ponies ...	60 to 200 00	50 to 250 00	No market.	50 to 200 00	80 to 250 00	
Sheep ...	8 to 15 00	6 to 12 00	...	4 to 18 00	8 to 15 00	
Goats ...	12 to 25 00	4 to 10 00	10 to 18 00	4 to 15 00	5 to 12 00	
Swine, per 133½ lbs. ...	20 per picul.	20 to 25 00	21 to 24 00	19 to 44 00	18 to 20 00	
Milk, per quart ...	0 32	30 to 36 cts.	...	10 to 22 cts.	20 to 25 cts.	
Butter, Fresh, per lb. ...	0 85	60 to 80 cts.	85 to 90 cts.	80 c. to \$1.25	...	
Do., Salt, do. ...	75 to 80	50 to 60 cts.	1 20	40 to 90 cts.	60 to 80 cts.	
Cheese, do. ...	45 to 65 cts.	45 to 60 cts.	No market.	No market.	65 cts.	
Beef, per lb. ...	15 to 24 cts.	16 to 20 cts.	50 to 65 cts.	16 to 25 cts.	25 to 30 cts.	
Mutton, do. ...	25 to 36 cts.	28 to 32 cts.	75 to 1 00	30 to 50 cts.	50 to 60 cts.	
Pork, per Kati ...	25 to 32 cts.	24 to 32 cts.	32 cts.	25 to 40 cts.	38 to 40 cts.	
Rice, white, per 133½ lbs. ...	{ 6 50 to 9 00 }	{ 26 to 32 cts. \$ (per gantang.†)	{ 35 to 56 cts. (per gantang.†)	{ 31 to 50 cts. (per gantang.†)	{ 6.00 to 7.00 per pikul.	
Coffee, do. ...	25 to 35 00	28 to 35 cts. (per Kati.†)	30 cts. (per Kati.†)	32 to 40 cts. (per Kati.†)	{ 40 to 45 cts.	
Tea, per lb. ...	45 to 90 cts.	50 to 65 cts.	60 to 75 cts. (per Kati.†)	25 to \$1.70 cts. (per Kati.†)	75 to 1.25 cts.	
Sugar, white, per Kati ...	0 09	7 to 10 cts.	10 to 15 cts.	8 to 12 cts.	7 to 10 cts.	
Salt, per Kati ...	0 02 (per Kati.†)	0 02 (per Kati.†)	0 04 (per Kati.†)	0 2 cts. (per Kati.†)	0 02 (per Kati.†)	
Wine, per dozen ...	{ 8 00 to 16 00 (plus duty.)	{ 8 00 to 20 00 (plus duty.)	...	{ 9 00 to 21 60 (plus duty.)	{ 8 00 to 24 00 (plus duty.)	
Brandy, do. ...	{ 12 00 to 26 00 (plus duty.)	{ 8 40 to 28 00 (plus duty.)	Hennessey.	{ 9 60 to 36 00 (including duty)	{ 12 75 to 15 75 (plus duty.)	
Beer, do. ...	{ 2 10 to 3 25 (plus duty.)	{ 2 50 to 4 40 (plus duty.)	3 00 (including duty.)	{ 2 00 to 3 60 (plus duty.)	{ 2 25 to 4 60 (plus duty.)	
Tobacco, per lb. (Native) ...	20 to 60 cts. (per Kati.†)	45 to 80 cts. (per Kati.†)	96 cts. (per Kati.†)	30 to 90 cts.	30 to 50 cts.	
Potatoes, per Kati ...	3 to 6 cts.	5 to 7 cts.	10 to 12 cts.	5 to 10 cts.	6 to 8 cts.	

* Prices vary locally according to supply. † Kati=1½ lb. av. ‡ Gantang=Gallon; Chupak=Quart. § 32 to 48 per Gantang since October.

AVERAGE PRICES OF VARIOUS ARTICLES OF USE OR CONSUMPTION.—Continued.

ARTICLES.	SINGAPORE.	PENANG.	DINDINGS.	PROVINCE WELLESLEY.	MALACCA.	REMARKS.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
Yams, per pikul ...	2 to 4 cts. (per Kati.°)	2 to 3 00	1 50	2.00 to 6.00	2 to 6 cts. (per Kati.°)	
Onions (large) per Kati ...	7 to 10 cts.	5 to 7 cts.	12 cts.	5 to 10 cts.	7 to 10 cts.	
Geese, each ...	1 75 to 2 00	1 25 to 1 60	2 to 3 00	1 00 to 2 50	1 50 to 2 50	
Turkeys, „ ...	3 00 to 5 00	5 to 10 00	None.	2 to 6 00	None.	
Ducks, „ ...	50 to 65 cts.	40 to 70 cts.	75 to 1 00	30 to 80 cts.	50 to 80 cts.	
Fowls, „ ...	35 to 70 cts.	35 to 70 cts.	60 to 1 00	25 to 80 cts.	80 to \$1 00	
Capons, „ ...	1 50 to 2 00	{ 1 00 to 1 50 }	2.00 to 2.50 each.	1 00 to 3 00	1 50 to 2 00	
Pigeons, „ ...	25 to 30 cts.	20 to 30 cts.	25 to 30 cts. each.	15 to 30 cts.	8 to 12 cts.	
Hen's Eggs, doz. ...	30 to 36 cts.	24 to 30 cts.	36 to 42 cts.	24 to 36 cts.	30 to 36 cts.	
Sago, per kati ...	4 cts.	6 to 8 cts.	...	5 to 14 cts.	8 cts.	

SCHEDULE OF RATES PAID FOR LABOUR IN THE STRAITS SETTLEMENTS DURING 1911.

Description.	Singapore.	Penang and Province Wellesley.	Malacca.	Labuan.
	Per day.	Per day.	Per day.	Per day.
	\$ c.	\$ c.	\$ c.	\$ c.
Sub-overseers ...	1 00 to 3 00	1 00 to 3 00	1 00 to 3 00	1 70 to 2 00
Artificers ...	60 „ 2 75	60 „ 1 30	60 „ 1 30	60 „ 1 30
Mandors ...	40 „ 2 00	40 „ 75	40 „ 75	40 „ 50
Coolies ...	25 „ 50	25 „ 50†	25 „ 50	35 „ 40
Watchmen ...	30 „ 45	30 „ 35	30 „ 35	30 „ 40
Surveying Coolies ...	30 „ 60	30 „ 50†	30 „ 50	40 „ 50
Surveying Mandors ...	40 „ 75	40 „ 75‡	40 „ 75	50 „ 75
Gardeners ...	30 „ 45	30 „ 45	30 „ 45	30 „ 45
Time-keepers ...	45 „ 1 00	45 „ 1 00§	45 „ 1 00	...

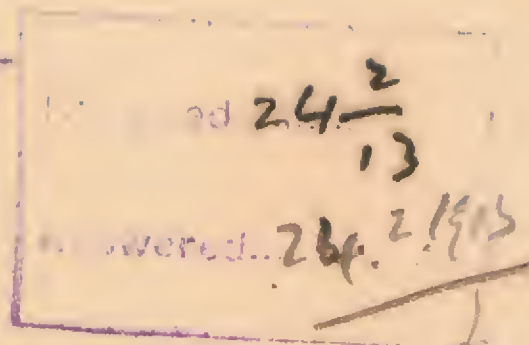
* Kati=1½ lb. av. † From 30 cents to 60 cents in Pulau Jerejak and Dindings. ‡ From 40 cents to 85 cents in Pulau Jerejak and Dindings. § From 45 cents to \$1.25 in Pulau Jerejak and Dindings.

of f.
My impression is that there is a
general tendency of weakness in all
cultivations excepting Rubber & coconuts.
I have only been able to discover one increase
- pineapples. The turning industry
has increased enormously during the last
two years but it must not be overlooked
that the plant is everywhere cultivated
as a catchcrop.

Rubber seems to be interplanted with
all crops but the effect is not in
evidence for the moment.

The rubber industry creates of
itself ^a certain demand for fruit & shade
trees but not beyond estate requirements.

A.D. 24. 1. 13



District Office, Nibong Tebal,

21st February 1913.

Sir,

I have the honour to acknowledge your letter of 14th instant.

2. With regard to the agriculture of this District the only outstanding feature is the increase of rubber cultivation. In 1912 the acreage was 16,655 as against 9,450 in 1911.

3. Other crops have remained practically stationary as regard acreage though the padi harvest bids fair to be a record and certainly a tremendous advance on last year.

I have the honour to be,

Sir,

Your obedient servant,

District Officer,

NIBONG TEBAL.

The Director,

Botanic Gardens,

Singapore.

S. S.

A note on the Agriculture of the S.S.

Any set-back which rubber-cultivation may experience from the present reduced price of the product, is not yet apparent. New land is still being planted in all the Settlements; and where estates have had divided interests, - whether in rubber and coconuts, or in rubber and gambier, or in rubber and tapioca, there has been a wide-spread tendency to remove the second crop. Sugar too, in the Province Wellesley has had interest withdrawn from it in favour of rubber.

The cutting out of coconuts, though generally of young trees, has in Penang and in Singapore, extended to mature trees in bearing. Nevertheless, at least in Singapore, the cocenut crop has been very good.

Pineapples, widely planted in Singapore as a catch-crop under young rubber, and also planted by themselves, have fruited in abundance, so that the price of the fruit at the tinning factories fell to 50 cents per hundred.

Fruit trees in Singapore island have not yielded freely; and there is a growing tendency towards the importation of the necessary supply from a considerable distance. The consequent rise in prices seems to promise an increased interest in the planting of Plantains.

The market-price of vegetables in Singapore grows higher because suitable land for their cultivation near the town is insufficient, and supplies in parge part are drawn from remote parts of the island.

Gambier and indigo cultivation have become insignificant in Singapore island.

Returning to the subject of rubber, it may be said that the estimated yields of the estates closing their year between June and December are being or promise to be fulfilled or exceeded

Only in Singapore island does some uncertainty exist.

Minute paper No. _____

Sheet No. _____

from the Governor's Speech - Oct. 3. 1913.

AGRICULTURE AND PLANTING.

Turning to agriculture the principal feature of the year has of course been the very severe and unexpected fall in the price of rubber. The cultivation of rubber does not as yet appear to have suffered any serious set back. While it is true that few applications for Crown land are now being received, new land already granted is still being planted in all the Settlements, and where estates have had some other form of cultivation together with rubber, whether it is coconuts, gambier or tapioca, the tendency to remove the second crop shows few signs of diminution. Sugar also in Province Wellesley has suffered a loss of interest in favour of rubber.

The estimated yield of rubber estates closing their year between June and December is in almost all cases being fulfilled or exceeded. In Malacca the export which for 1912 totalled 5,648,266 lbs. valued at \$10,353,914 amounted in the first six months of 1913 to 4,226,933 lbs. valued at \$6,308,827. The first half of the year being the lean half the next six months should show even larger figures, the quantity being further swelled by more trees arriving at the tapping stage. The total export for this year is likely to be over 9,000,000 lbs.

With regard to other products, about 82,000 piculs of tapioca were exported from Malacca in 1912 at an average price of \$8 to \$8.25. For the first six months of the current year production and export have been on a smaller scale, about 35,000 piculs at a reduced average price of \$6.70. Ten thousand four hundred and forty piculs of gambier valued at \$115,740 left that Settlement between January 1 and June 30, 1913.

The cultivation of coconuts in the Dindings continues to attract attention. The large estate opened at Bruas is being rapidly planted up and another estate of 3,000 acres is being opened chiefly in coconuts by a Chinese owner.

The coconut crop has been good at Singapore in spite of the fact that even mature trees have in many cases been cut down to make way for rubber.

There are, however, no signs of coconut cultivation being taken up on a large scale in Malacca.

The reports of padi cultivation are, I regret, generally discouraging. In Province Wellesley it is reported that even with a fair harvest the Malay planters are compelled to sell or hand over the greater part of their crop to meet the demands of the lessors of the padi fields or the claim of the money lenders. F 32/10

Government appreciates the advantage of persuading the raiat to use their own hand-milled padi instead of buying the polished rice in the market. Efforts are also being made to prevent or keep down the scourge of rats and other vermin by measures directed against the owners of land left uncultivated.

In Malacca persuasion was last year brought to bear upon the raiat to try to induce them to cultivate, and this year the district officers have again received instructions to exert influence in the same direction. Last year for the first time the dates for clearing and planting were fixed by mukim councils and a number of recalcitrants have now been summoned. Progress, however, is but slow as the Penghulus intensely dislike taking summons against the men of their kampongs, and it seems likely that the remedy must lie in forfeiture of land not regularly cultivated. With this end in view an amendment to the Malacca Lands Ordinance is now under consideration.

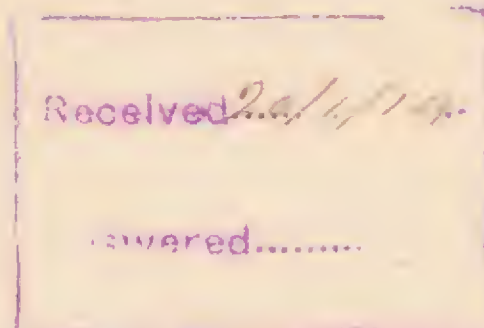
Pineapples widely planted in Singapore, often as a catch-crop under young rubber, have fruited in abundance so that the price of the fruit at the tinning factories fell to 50 cents per hundred.

Fruit trees in Singapore island have not yielded freely and there is a growing tendency towards the importation of the necessary supply from a considerable distance. The market price of vegetables in Singapore grows higher owing to the insufficient area of land near the town suitable or available for their cultivation. Supplies are in large portion drawn from remote parts of the island.

The Estate Labourers Protection of Health Ordinance referred to in my address last year has been the subject of protracted consideration and it is only recently that an amendment which it is hoped will meet the views of many has been drafted and placed before the Legislative Council. In the meantime the medical department has continued to press improvements in water supply and sanitation for the coolies' benefit. The appointment of an officer to visit estates in the Negri Sembilan and Malacca was made some months ago and has been of much use in increasing the supervision of estates employing Tamil labour. F 32/10

Colonial Secretary's Office.

Singapore, 17th Jan. 1914.



Annual Report on the Straits Settlements.

SIR,

I AM directed to request that you will be good enough to make the necessary corrections for the year 1913 in the enclosed printed Return of *Agricultural Industries*.

2. The information is required for the Annual Blue Book Report of the Colony and it is of great importance that it should be as accurate as possible.

3. I shall be obliged by your sending in the Return before the 31st instant, as the Government is anxious to have the Report published at as early a date as possible.

I have the honour to be,

Sir,

Your obedient Servant,

[Signature]
for Colonial Secretary,
S. S.

The Director of Gardens.

The declines are small: they occur in values of gambier, jelutong, and Borneo rubber.

Of exports to the Continent values rose in tin, illipi nuts, phosphates of lime, gambier, sago, rattans, pepper, tapioca, preserved pines, and India rubber, but fell off chiefly in copra, gutta percha, gum copal, and Borneo rubber.

Exports to the United States advanced in values of tin, Para rubber, peppers, and gum copal, but fell in values of jelutong, gutta percha, rattans, copra, and gambier.

Values rose in the case of imports from Netherlands India, India and Burma, Federated Malay States, Indo-China, Japan, Non-Federated Malay States, Siam, British North Borneo and Sarawak, Hongkong and China, and Australia and New Zealand.

Exports values also rose in the case of the Federated and Non-Federated Malay States, Netherlands India, Japan, Siam, Borneo and Sarawak, French Indo-China, India and Burma, but fell off in the case of Hongkong and China and Australia.

AGRICULTURAL INDUSTRIES.

The area under Para rubber increased very considerably in Malacca and also to some extent in the island of Singapore: in Malacca it was 80,424 acres in 1911, and it is now 115,000 acres. By the side of this increase, there has in Malacca been also an increase in land under tapioca amounting to no less than 52.3%; for the 10,926 acres of 1911 have become 16,643 acres. Formerly the cultivation of tapioca in Malacca was on the decrease, and old tapioca land in 1909 was being put under rubber; but the need of a catch crop to young rubber began in 1911 to cause a recovery of the lost area.

In spite of the fall in price rubber continued highly remunerative both to proprietors and labourers. The wages of the latter were high enough in some cases to cause Malays to desert well established Kampongs and long cultivated padi fields to take up permanent work on Estates.

In the Northern Settlement tapioca has not materially changed and rubber has increased only slightly. Nutmeg and clove cultivation has in many allotments been abandoned on account of the higher rates for labour and of the fall in the prices of these products.

The extension of pine-apple cultivation in Singapore island continues, the crop being a catch crop to rubber, and the fruits finding a ready sale at the canning factories in Singapore. These canning factories also draw pines to some extent from outside the Colony. The cultivation of pine-apples has no place in Province Wellesley.

Coconut plantations have increased slightly in Singapore island and in Province Wellesley. Interest in them and in other Oil plants, *e.g.*, *Elaeis guineensis* (the African Oil Palm) and ground-nuts, has a tendency to grow.

In Penang coconuts were a little cheaper than in 1911, probably on account of a fall in the demand for copra. In Province Wellesley on the other hand they remained at a high price, the average price being nearly \$41 per 1,000.

The Manchurian Soya bean, tried in Singapore, proved useless for the country, as was to be expected.

The area under rice in Malacca and in Province Wellesley is almost the same as it was in 1911.

In Penang and Province Wellesley the padi crop was generally poor.

Gambier, combined with pepper, occupied in 1912 a slightly larger area in Malacca than in 1911, and holds its own in Singapore island. Fruit and vegetable cultivation is not extending concomitantly with the extension of European owned and managed plantations, and, labour being much in demand, seems unlikely to extend.

LAND GRANTS.

The area of Crown Land alienated, and the number of Statutory Grants issued and the premia paid for the same during the last five years are as follows:—

SINGAPORE.

	1908.	1909.	1910.	1911.	1912.
	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Area granted ...	419 3 12	338 2 14	4,542 1 30	4,944 3 02	1,275 0 12
	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.
	183,543	45,514	22,956	206,010	59,242
Number of Statutory Grants issued ...	144	33	100	127	68
Premia paid ...	\$6,715.00	\$13,202.90	\$154,506.77	\$148,222.79	\$69,821.25

PENANG.

	1908.	1909.	1910.	1911.	1912.
	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Area granted ...	663 1 08	723 1 05	4,004 1 06	2,764 0 04	2,962 3 38
	sq. ft.	sq. ft.	sq. ft.	sq. ft.	sq. ft.
	232,191	7,535	76,423	409,787	9,249
Number of Statutory Grants issued ...	63	102	129	169	79
Premia paid ...	\$3,113.85	\$4,890.75	\$16,275.97	\$14,310.19	\$18,567.75

16th. March, 1914

Asking if there is any objection to the publication in the Gardens' Bulletin of a review of the Agriculture of the Settlements in 1913.

Sir,

I have the honour to forward to you the account of the Agricultural Industries of the Straits Settlements for the Annual Report for 1913 (Col. Sec. 364/1914).

I have taken trouble to make it more complete than in past years; but lest it should be too long I have omitted much of interest, chiefly statistical, bearing out the statements made in it. I should like to work up this, my further material, into a review for the Gardens' Bulletin, and beg you kindly to inform me if there is any objection to such a course.

I have the honour to be,

Sir,

Your obedient servant,

Director of Gardens, S.S.

The Honourable

the Colonial Secretary,

Singapore.

Account for
Annual Report
which was rewritten in
September

Account for
Annual Report
which was rewritten in
September

Account for
Annual Report
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September

Sago is still produced in some quantity; but the amount of raw material obtained is decreasing. Tapioca is rarely grown now except for use as a vegetable.

The december crop of Durians was good, and so was that of Rambutans but the crop of Mangosteens was not good.

Coconut pests have been troublesome. There has been an increase of the Palm weevil in the centre of the island, and a serious outbreak of the moth *Brachartena catexantha* in the east of the island, which ~~will~~ ~~will~~ will affect the crop of nuts in 1914.

Penang. The agriculture of Penang shows little change. Nutmegs- and Clove-cultivation is apparently decreasing: and the output of the year of the former has been very small. The coconut and areca-nut crops have been fairly good. Mangosteens were produced freely, and their lowest price was \$3.50 per hundred. Durians fruited normally. An impression gained in Penang is that there will be an increase shortly in the ^{size} ~~the~~ ~~the~~ of mangosteen crop on account of the number of young trees now coming into bearing. There is no sign of an increase in the output of plantains, though the demand would seem to be considerable: and similarly though the local supply of vegetables is hardly adequate, there appears to be no increase in their cultivation.

The rice crop of 1912-13 was not good; but that of 1913-14 is very promising.

Province Wellesley. The last of the sugar cultivation in Province Wellesley has disappeared, except of course

that grown for eating. At the end an experiment was made on the Central Factory System, small areas being allotted to cultivators who were to cut the cane as required: but it failed by reason of the incompetence of these cultivators. When men of the same class grow tapioca it is by no means uncommon for their produce to be almost worthless, ~~but~~ but where they live as squatters growing vegetables among very young rubber or coconuts, the result seems better. There is at present within the Province a not inconsiderable amount of such cultivation, the vegetables being beans, the smaller fruits of the cucumber order, brinjals, and pineapples. They appear to try nothing new. But there is at Bukit Mertajam an area under the Arrowhead *Sagittaria sagittifolia* grown by a Chinese for feeding pigs, now at least two years old and apparently very profitable: the area is extending at the expense of rice.

Rice in 1913 gave a fair harvest. The coming crop of 1913-14 promises very well.

Tapioca has been grown rather extensively in the province: but the fall in price is most prejudicial. Often it is better to feed the roots whole to pigs than to extract the starch.

The fruit trees which exist in the province are mostly old trees which formerly made orchards round country houses. They require replacing. The last of the nutmegs at Bukit Mertajam are dying.

Coconut estates have largely failed to attain the estimates. In some cases this has been due to want of knowledge of the nature and yielding power of the tree on the estate, in others to want of attention to the

trees (especially has this been the case where there have been joint interests in rubber and coconuts, the former absorbing the chief attention), and in some cases to inflated expectations. There was a small outbreak of *Brachyartona catenantha* in the latter part of the year.

The Dindings. The rubber estates in the Dindings and of importance are six: the oldest has developed all its land within the boundary, and has a steadily increasing yield although the first planted trees do not now give the large quantity of latex which they used to do. The newer estates are just in bearing or almost in bearing one of them is interplanted with tapioca, and feeling considerably the low price at which it sells. It has a large area unplanted: but all the others are well forward towards maturing their lands.

The large new coconut estate on the Bruas river promises well.

Again a little rice has been planted on the northern boundary(100 acres).

A feature of the Lumut district is the casting by Tamils of other classes of labour; and connected with it is a tendency for experiments to be done with Tamil crops. Thus it comes about that near Lumut may be seen small patches of ground-nuts, of the millet called ragi- *Eleusine coracana*- and of Sesamum

Malacca. The area under rubber in Malacca has increased to 117,200 acres: and it is to be noted that 13.6 per cent of the total is newly planted land. In 1912 12.8 percent of the present total was planted and

in 1911 6.7 percent. Though the price of rubber has fallen so greatly (fine plantation Para in London from 4s.3d. to 2s.3d.) the situation is only unsatisfactory in this that the market most emphatically declares that the rubber produced is inferior to fine hard Para. The cost of production diminishes as the trees mature, and many economies have been found possible. On the motion of the Malacca Planters Association wages ~~have been~~ have been reduced without friction: and this could not have been done unless the supply of labour were adequate. Many estates are using disc-harrows drawn by draught animals as cheaper than manual labour, and one estate is using steam ploughs.

The estates knew their possibilities: and the errors in estimates of output are merely that the management slightly and intentionally underestimates in order to be on the safe side.

From the point of view of Government it is desirable that all the land allotted to the companies should become remunerative. A year ago the larger companies held ~~RM. RM.~~ 102,076 acres: more than 52 per cent of this is now in rubber and granted the willingness there is financial strength sufficient with rubber at its present price for the maturing of a further 40 percent.

Catch crops under rubber are being abandoned generally. The result is an enormous diminution in the output of tapioca. The area under this crop has dropped from 16,645 acres in 1912 to 7,555 acres in 1913.

Along with the decrease of Tapioca, there has been an enormous diminution in pig raising. It was and still is the custom for squatters to rear pigs under the Chinese

owned coconut palms fattening them on the ampas or refuse of tapioca manufacture. The pigs so raised met the whole demand of Malacca and were sent to the Federated Malay States in large numbers. Now however the export had almost ceased and not to fatten the supply for local demand an import of the ampas is required.

With the decrease of pig-rearing the price of pork has risen ^{nearly} 40 per cent.

Gambier cultivation is slightly on the decrease. It has been cut out of a few rubber estates where it was a catch crop, but it remains in many more by reason of the strong penchant which the Chinese who own these estates have for catch crops.

The production of sugar from the Kabong palm - *Arenga saccharifera* - true Gula Malaka - decreases: though the palm is as extensively grown as formerly.

Coconut and Areca palms grown with it on Malay homestead lands appear to have yielded rather less than an average crop in 1913. The coconut crops are dirty and ill kept: but the small crop was probably due to climatic causes.

The production of ginger has been below the average. The pepper locally produced only meets local demand. Fruit was yielded in abundance in 1913.

The Malays of Malacca have tried no new crops.

The rice harvest of 1912-13 was a bad one: the weather in 1912 had been unfavourable to the growing crop; wages were high and the cultivators drawn off as tappers on the rubber estates, and there was some want of plough animals as a result of the rinderpest visitation of and clearing of hillsides, about the sources of the

streams had caused them to discharge their rain water in freshets which flood the bordering fields. The coming crop of 1913-14 is full of promise on the well drained lands, but very uneven as a whole, for the damage done by the freshets is intent. The area of the crop is rather reduced in spite of the though animal difficulty having been removed by liberal advances from Government, and in spite of the more normal labour conditions, and in spite of official pressure having been exercised to ensure the planting of the land. It is the intention of Government next to do something towards remedying the change brought about in the nature of the streams by reason of extending cultivation. Locusts did a little harm to growing rice and some harm to coconuts palms; but otherwise the swarms of which there are several wandering about the hill sides near Tampin and crossing and recrossing the Sungai Linggi between Port Dickson and Malacca have hardly as yet affected the prosperity of the country.

C. report 4/13

The number of bankruptcies was not great, nor the amount involved large, but at the close of the year the Chinese market generally was in a more than uneasy condition.

AGRICULTURE.

One of the most notable events of the year was the collapse of the price of rubber, which fell from 4s. 8d. for fine plantation para in London to 2s. 3d. With the enormous increase in the production of this commodity throughout the world it was impossible for a high price to be maintained, but the suddenness of the fall and its arrival so much earlier than had been anticipated, may be attributed to certain causes subsidiary to that of over-production. Of these the first in time was the stagnation of certain trades in Germany, Austria and neighbouring countries consequent on the Italy-Turkish War and the wars in the Balkans, but the most important was the uncertainty with regard to the American tariffs, on account of which American importers, hitherto by far the largest buyers, have been unable to purchase largely in advance. The combined effect was the oversupply of the British and Continental markets. With the reduction of the American tariffs a largely increased consumption by America may again be expected but the continual increase of production precludes the hope of any large recovery in price; in fact it is probable that the price is now practically established. A revival must in any case be preceded by an improvement in the general financial situation throughout the world. With the fall in price came the necessity for a reduction in estate expenditure. The cost of production naturally diminishes as the trees mature, but many economies have in addition been found possible. In Malacca on the motion of the Malacca Planters' Association wages were reduced without friction, thus satisfactorily proving that the supply of labour is adequate. Many estates are using disc-harrows drawn by draught animals as cheaper than manual labour, and one estate is using steam ploughs.

Though the inflated dividends of previous years are gone for ever, reasonable profits can be expected, and the only really unsatisfactory feature of the situation is that the market still considers average plantation rubber to be inferior to fine hard Para. Certain known marks, however, have been sold at the same price as Para, and if standardization can be effected it is to be hoped that producers of other marks, at present less known, will share in the enhanced price that recognized quality can command.

The planting of fresh land in rubber continues in every Settlement of the Colony, and shows that the planters still retain their confidence. The area under rubber cultivation in Malacca is 117,200 acres.

Catch crops under rubber are being abandoned generally. The result is an enormous diminution in the output of tapioca. The area under this crop has dropped from 16,643 acres in 1912 to 7,353 acres in 1913.

Along with the decrease of tapioca, there has been a correspondingly large diminution in pig raising. It was, and still is, the custom for squatters to rear pigs under the Chinese-owned coconut palms fattening them on the *ampas* or refuse of tapioca manufacture. In past years the pigs so raised met the whole demand of Malacca and were sent to the Federated Malay States in large numbers. Now, however, the export has almost ceased; and to fatten the supply for local demand an import of the refuse is required.

The rice harvest was fair in Province Wellesley, and bad in Penang and Malacca. In Malacca, not only was the season unfavourable to the growing crops, but there was a smaller area than usual under cultivation owing to the attractions offered by fairly high pay and moderately easy work upon the rubber estates.

Coconut estates in Singapore have largely failed to attain their estimates. In some cases this has been due to inflated expectations and a want of knowledge of the nature and yielding power of the trees on the estate, and in others to want of attention to the trees. This has especially been the case where there have been joint interests in rubber and coconuts.

Some large estates in the Dindings are, however, said to be doing well.

Coconut pests were troublesome in Singapore. There was an increase of the Palm weevil in the centre of the island, and a serious outbreak of the moth *Brachartona catoxantha* in the east of the island, which will affect the crop of nuts in 1914.

The cultivation of gambier is rapidly decreasing, and indigo cultivation has practically disappeared.

The plague of locusts which has been afflicting the Federated Malay States appeared in Malacca during the year. Its presence is as yet confined to the vicinity of the Negri Sembilan boundary.

ALIENATION OF LAND.

The area of Crown Land alienated, and the number of Statutory Grants issued during the last five years together with

AGRICULTURE.

The agriculture of the Straits Settlements continues to expand, but the conditions are very artificial in consequence of high freights and unusual demands.

Labour has been in deficit: and higher wages resulted from this and from the increased cost of all imports. Further as it has been necessary that the management of the British-owned estates should spare a part of their supervising staffs for the war, it has been difficult to attain estimates in some cases.

The premier crop, rubber, has paid very well; and the market has been without the large speculative element which was present in 1916. Local selling has greatly increased, and with profit to the Colony, because freight to Europe for re-export to America can thereby be avoided, and for the reason that the manipulation of the market becomes harder for dealers when selling can be done in many places.

But the profits from rubber production have decreased, because while prices fell throughout the year, expenses rose, both in increased wages and from the high cost of tools, machinery and chemicals. However, many estates are achieving production at what may be regarded as the minimum current rate; and the market price has been about twice this or higher.

On the other hand coconut produce paid meagrely at the beginning of the year, prices declining further as the year passed; in consequence of which the already established tendency to remove the palms for rubber took further hold, and while leading to but little destruction of trees in bearing in Malacca, led to more in Singapore and to much in Penang or Province Wellesley, until an Enactment was called for to restrain it. The crop of nuts was good in the early part of the year, and fair generally. The difficulty of selling the copra to Europe appears to have favoured crushing for oil in Penang; for exports thence continue to increase. That this should occur is good, for it is of advantage to retain the cake in the country.

The tapioca market was speculative; but prices were generally good. A slight increase of the crop in Province Wellesley has taken place, but nevertheless the total production is small, as the cultivation has moved northwards.

Pig and poultry raising, which are partly subsidiary occupations of the tapioca industry, and partly of vegetable-growing, tend more and more to desert the Colony. So much has this been so in Malacca that there is now an import of twelve thousand pigs in the year, whereas there was an export of as many in 1910: and Malacca has now but a very small export of poultry. Penang, which had a very large export of poultry,

has now a larger import than export: and its export of pigs is not half of what it was three years ago. Singapore has long had a larger import than export of both; though the by-products of its industries would seem to promise plentiful pig or poultry food.

Freights having driven up the cost of imported foodstuffs, those which can be produced in the Colony have fetched better prices in the markets, and the growing of them has received a stimulus. Rice has been more extensively sown than in any recent year, and the crop promises well. Vegetables have been grown in increased quantity in most places: ginger particularly in Malacca.

The fruit crop of 1917 was a very poor one, partly as a result of the bountiful crop of 1916, in consequence of the trees demanding a rest, but mostly because of the unseasonable weather when the trees flowered. For the same reason cloves bore badly in Penang, and the rice crop of 1916-17 was spoiled.

There is no tendency in Penang to neglect the pure clove plantations; but the mixed clove-nutmeg-areca palm gardens are suffering much from want of attention. It appears that this has been caused, like the decrease in the local fisheries and in some other occupations of men of small means, by the attractiveness of rubber-planting. It is certainly responsible for the fact that Penang no longer exports more nutmegs than it imports, and from being a producing centre has become rather an entrepôt for the Sumatra trade. It seems also to be responsible for the reduction in the exports of areca-nuts from Penang.

Similarly village fruit-growing would seem to be declining in Malacca and also the export of areca-nuts.

Gambier just persists in the Colony. As a catch crop for rubber it has virtually ceased to exist. Pineapple cultivation in Singapore is also less in use as a catch crop than formerly: but the industry of canning the fruit is suffering eclipse on account of the impossibility of obtaining tin-plate.

Owing to the good returns rubber has been cultivated on a more scientific basis. Thinning has been very extensively done, and tapping placed on to a more conservative basis: but there are an enormous number of small holdings, the owners of which cannot or will not wait for their profits, and some anxiety is caused by these plots of weakened trees. Fortunately rubber in the Settlements is very free from disease: one small outbreak occurred in Malacca, and the advice of the Department of Agriculture of the Federated Malay States was sought. It is noticeable that more attention is being given to the advantages of manuring.

Coconuts are not receiving much attention, but are generally healthy, save for insect pests, of which a new one, unrecorded, but perhaps not altogether unknown, a beetle,—has done some damage near Malacca town. The moth *Brachartona* has been prevalent in Singapore island.

School of Foreman Press

2.10.14.

Penang, has been completed.

AGRICULTURE.

It is just a year since the great fall in the price of rubber ended. From that time until the outbreak of war in August the rubber-planting industry has had a period of market that can only be described as satisfactory to the fully financed estates: but for those incompletely developed estates which during the fall by choice or force of circumstances used income as capital, the year has been a difficult one, resulting in a general arrest of further planting and, in Malacca, in the surrender to Government of lands lying unplanted. The surrender has not, however, been wider than was expected: and the cessation of planting rubber seems generally desirable at the present in view of the inevitable over-production.

The amount of rubber exported from Malacca in 1913 totalled 9,887,200 lbs.; the value was \$10,925,983, little more than that of the 5,648,266 lbs. exported in 1912.

Consequent on the fall in price great and successful efforts have been made by the planting community of Malaya to bring down their costs, and in this they have been preparing for the increasing struggle against other rubbers on the world's markets. In respect of this struggle the position of the Malayan industry appeared satisfactory when the outbreak of war in Europe suddenly stopped sales: the calamity now gives some advantage to the countries competing by means of wild rubbers, for they have no cost of cultivation and their assets are conserved while the markets are stagnant. It is extremely difficult to estimate in advance the effect of the war: for though access remains to the American and English markets which buy 70 per cent. of the world's produce, the selling power of the manufacturers in the present crisis is not ascertainable.

There has been very little increase in the cultivated area of Singapore, but most of the land under cultivation has been kept in excellent order. Large areas under rubber are now beginning to approach the tapping stage and the low price has served as a check on the tapping of immature trees.

The coconut industry has had a prosperous year: prices have been high and the crop of nuts good, so that the quantity of copra and coconut oil exported has been relatively large and the return in money still larger. But the outbreak of war severely affects the northern Settlement, whence 80 per cent. of the exports used to go to ports now closed to trade, and much of the rest to ports, such as Marseilles, whose mills are idle. As coconut forms an ingredient in foodstuffs an early recovery at least in part is probable: but it appears that England has been very largely dependent on the Hamburg refineries for pure oil, thereafter made into butter substitutes at home, so that she is not fully equipped to take up the whole trade.

Large areas of land continue to be taken up in the Dindings for the cultivation of coconuts, and some additions to existing plantations were made in Singapore. In Malacca also more attention was paid to this form of cultivation and copra to the amount of over 57,000 piculs, of a value of about \$610,000 was exported in 1913.

The market for tapioca throughout the year has been bad and its cultivation has been much reduced, particularly in Malacca. As a catchcrop under young rubber it is no longer needed in many estates. Province Wellesley was more adversely affected by the low prices than Malacca.

The rice harvest of 1913-14 was everywhere good except in a very small area of Malacca which suffered from the past neglect of the sawahs, dating from the rubber boom, and the change in the nature of streams owing to the clearing of hills. The prospects of the crop of 1914-15 are not yet assured. Rain did not fall when the land should have been ploughed, and the coincidence of the Mohammedan fast much delayed ploughing. In Malacca the extent of rice fields cultivated will be greater this year partly owing to the influence of the District Officers and Penghulus and partly owing to the fact that the reduction in the wages for tapping rubber trees has caused a number of Malays to return to the cultivation of their padi fields and kampongs.

The fruit crop has everywhere been excellent. The growing of vegetables in catch-crops on the southern estates of Province Wellesley appears to be a success. There seems to be a slight extension of fruit and vegetable growing about Singapore.

The pine-apple industry in Singapore is in a satisfactory condition, and much new land has been planted to make up for the removal of the crop from the large rubber estates: there is however little suitable land now available. The crop has been satisfactory.

There was one serious outbreak of plant-disease, namely, that of the coconut moth, *brackartona catoxantha*, at Serangoon in the last two months of 1913 and the first of 1914. The pest was arrested and destroyed by a parasitic fungus.

Coconut beetles were rather numerous at one time in Singapore island, but have been got under. Migratory locusts have caused uneasiness in Malacca, but as a matter of fact have done extremely little injury; they are however on the increase in the Negri-Sembilan-Malacca region: and as their capacity for destruction is known from experience elsewhere, it would not be right to ignore the possibility of danger from them. A special officer is now in charge of locust-destruction in Malacca.

C.S. *nt*

Agriculture.

During 1914 the prices of the chief Malayan agricultural exports which are shipped west, fell in the world's markets. Rubber, for instance, after repeating the seasonal rise of three out of the last four years, fell again before war broke out to the point from which it had risen; near to which it has since been maintained by the decrease of its import into London, and elsewhere. The actual imports into London during 1914 amounted to less than those of 1913, and the total world's production appears also to have been slightly less; for though the production of plantation rubber has increased enormously, the decrease in output from wild sources has been even greater. Coconut products fell gradually towards the outbreak of war, lost their market when the crisis came, and then after a month began to find it again, the prices varying closely with the freedom of the sea. After the destruction of the German cruiser "Emden" they began to rise in a promising way. Sago and tapioca, low when the year began, went lower like the coconut products, but are now obtaining somewhat better prices. Puteh leaves lost their market entirely when war was declared. On the other hand gambier, which chiefly goes east, is a little more profitable than it was.

The amount of rubber produced in the Malay Peninsula shows a great increase, in which the Settlements have taken a more or less even part. An area of moderate extent has been newly planted in Singapore island, and a small one in the territory of Malacca. In the first named the rubber growing on the new lands seems to be entirely a subsidiary product for, by the terms under which the land has been let for the growing of pineapples, a permanent crop has to be planted and rubber seems to the occupiers to be best for such a purpose. In the territory of Malacca, the surrender to Government of lands taken up speculatively or unwisely by rubber companies in the boom, has been rather more than was anticipated, and many estates are finding it necessary to use revenue for completing development; but the revenue promises generally to suffice. Great economies have been found possible; the cost of production has been reduced wonderfully; and there are companies producing and marketing at below one shilling per lb.

In the older and Chinese-planted estates of Malacca thinning is being carried out extensively. Ploughing is also being resorted to more and more. Not a few factories are acting as centrals for small neighbouring estates—a procedure which goes some way towards reducing the variability of the quality of the product. The rubber plantations are very free from disease.

There is now extremely little tapioca associated anywhere with rubber, and the European estates Province Wellesley which formerly made tapioca have ceased to do so. A little Chinese tapioca-manufacture continues in Malacca.

Coconuts in most places have had a productive year. New land is being planted with them to a small extent in province Wellesley and in Singapore. The older estates in Province Wellesley, in some cases planted unsatisfactorily, have received a considerable amount of attention, and the trees are said to have responded to manure and cultivation given in 1913.

Pineapples occupy a slightly reduced area in Singapore island in consequence of their removal from under rubber on the

larger rubber estates. But this has caused new lands to be planted with them. The price of pineapples in Singapore town fell at the commencement of the war to fifty cents per hundred (which was also its minimum during the excessively large crop of 1913) in consequence of the cessation of work at the canneries. However, the work was soon resumed. It seems that fifty cents per hundred is the minimum price at which picking and carting can be done, the cost of cultivation then being lost.

The success of pineapple-planting in Singapore seems to have stimulated a small increase in the crop on Chinese owned land in Malacca and Province Wellesley, but without canneries the market there is very limited.

Gambier is being removed from under rubber in Malacca only very slowly. In Singapore island its cultivation persists in three mukims; and so long as the market maintains its present prices and labour is abundant, the crop is unlikely to disappear.

Vegetable growing is extending, especially in Singapore island, in consequence of the freeing of labour from estates. The last season has been favourable to vegetables; and prices on the Singapore markets have been much lower than they were. Chillies are among the special products of 1914. The Chinese who plant vegetables are in Singapore also planting a little indigo.

There is a slight further increase in Singapore of plantain cultivation. Small crops of tuba are by no means uncommon in the east of the island.

Throughout the Settlements the crop of mangosteens and other fruits has been very good.

The rice crop of 1913-14 was in places excellent: that of 1914-15 unfortunately started badly, for rain did not fall when required.

The locust pest in Malacca has done very little damage. The locust is destructive elsewhere under certain conditions; but is not so as yet in the Peninsula. Its favourite foods are certain pasture grasses, maize, etc., which do not play a large part in local agriculture; but it has attacked rice, sugar cane, coconuts and some other economic plants in a small degree. Measures are being taken against it in the hope of preventing it becoming really destructive. These measures are being carried out on the same lines as those undertaken in the Federated Malay States, and are taken in consultation with the Agricultural Department of the States.

This is what I said in 1914

(2,000—3/12.)

(Misc. 56)



Botanic Gardens, Singapore,
STRAITS SETTLEMENTS.

my draft for C.S.'s report

1944

1915

AGRICULTURE IN THE SETTLEMENTS.

Although trade conditions cannot be otherwise than unstable, Agriculture has not received any serious blow from the War. Instead there is a land boom in Malacca, men who are getting revenue from Beem-planted rubber on small holdings putting it into more land; while at the same time the Estates ^{have been} asking for more labour than there is available. Pests have nowhere been serious; and under a special Officer the increase of locusts in Malacca appears to have been checked.

In Singapore island the production of market-garden crops has ~~increased~~ more nearly ^{met} sufficient for the demand than at any date since the sudden ^{expansion} growth of planting took the small men off their plots; so that the price of all vegetables and some fruits has dropped considerably.

When the war broke out the anxiety of the rubber-producing companies was considerable; ²⁸ prompt selling for most of them was necessary for supplying ~~their~~ working capital; and it was far from clear that they would be able to sell. Under the circumstances many, especially those with holdings in Malacca, hedged by resorting to half-time tapping, ^{and} ~~these~~ have since in several instances admitted to a shortage of output as a consequence. But happily it took only a fortnight for ascertaining that to cut down work was not necessary: skilful handling of the financial situation in London, local assurance of monetary help, and the probability of freedom of the seas set tapping going again. Meanwhile slow clearances at the

docks, and a greater interruption of the shipping between Brazil and the consuming countries than to the East, kept stocks from accumulating until the enormous war-demand for rubber was revealed. The London weekly auctions were stopped; brokers submitted to a re-inveicing of their forward contracts; and the market kept a cool head.

Experts knew that war would bring a demand for rubber; but the extent came as a surprise. Immediately it was recognized the trade itself pointed out the necessity of preventing supplies from reaching the enemy, and ^{the Home} Government issued the necessary prohibitions. The declaration of rubber as contraband, the limitation of ports to which it might be sent, the concentration of the trade of Antwerp on London followed ^{it is worth noting} without greatly influencing the ~~the~~ market prices - not ^{influencing them} as much as the London's depredations ^{did for}. The lowest price at which "Plantation" has stood since the war broke out was just after the news of the sinking of the "Troilus" has reached Europe; ^{and} with the destruction of the ^{German war-ships in the Indian ocean} "Endon" the market began to rise and has never fallen ^{since} to last year's prices since.

There can be no doubt now that the demand for rubber is assured until peace is in sight, and again after peace has been declared until the warring nations have made good the greater part of the enormous wastage in progress. And then prices are assured for some time to come.

Synthetic rubber is no more in sight than it

was; and reclaiming though increasing, does not give back the actual rival of first class raw rubber.

One great change has come about though the war in the method of selling, namely the abandonment of the London weekly auctions. It is probable that they will never start again. Local auctions however are on the increase: not only is the amount of rubber changing hands at those of Singapore greater year by year, but the Penang auctions are increasing, and Batavia auctions have just commenced. These changes are in favour of the seller.

In last year an unexpected thing happened:— the world's ~~supply~~^{output} of raw rubber fell ^{just} below that of 1913. This was brought about by a decrease in supplies of wild rubber from Brazil or Africa which almost matched the increase in Plantations. Prophets have said that the same may occur in 1915, but present indications are of an increase, for not only is the output of Malaya enormously larger than in 1914, but Brazil put larger quantities onto the market over the first part of this year than in 1914, chiefly sending them to the United States, and promising the ~~1915~~ crop of the coming season early so that much will come in before the New Year.

The crop of Coconuts, so excellent in 1914, was very poor over the first quarter of 1915 in the northern part of the Peninsula, but has been satisfactory since. In the south of the Peninsula it has been satisfactory throughout.

The trade was very rude shaken on the outbreak

of War, for unfortunately about 88% of the exports of Penang ^{used to be} ~~were~~ taken by Hamburg and ~~other enemy ports~~ other enemy ports; so that the business abruptly stopped; manufacture of copra ceased; and time was necessary for the merchants to make new adjustments. Meanwhile the market price which had been low, recovered a little: then it fell until the "Enden" was destroyed, to rise again steadily until in March of this year the excellent level of January 1914, was recovered. From that position it has fallen again apparently as a result of competition with African oil nuts, etc., *but not to last years low level.*

Before the war Germany used to export to Britain as much as 20,000 tons of expressed coconut-oil. Consequently Britain is prepared to take something approaching this large amount without building mills for which there is at present insufficient labour. *The ^a condition ^{while} makes* it profitable to extract oil here; and it is *of ^{note} importance* that Penang had already by June 30th. last exported not less than 25,000 pikuls against an annual average of 20,000. Local extracting is distinctly advantageous to the Peninsula as it frees the cake for use on the spot.

The prices of Tapioca fluctuated over the first months of the war in the same way as those of Coconut products, but within narrower limits they reached a satisfactory maximum in April but have fallen again, although not to the low levels of 1914.

A fresh wave of Tapioca cultivation seems likely to spread over Malacca.

The last rice crop was good in most places;

The new crop has been favoured by ^{rainy} ~~good~~ weather at its ^{start} ~~beginning~~, and more of it has been transplanted in good time than in 1914.

Fruit crops in Penang have been ^{very} good, in Malacca moderate to good, in Singapore ^{rather} poor to fairly good, except Plantains which have yielded excellently. The worst local crop was the Mangosteen crop; but that was because the very big yields of 1914 compelled the trees to rest.

The pine apple industry of Singapore obtains all the material it needs in spite of the cutting out of the crop from the large rubber estates; but the price to the growers has been little remunerative. The cultivation of Tuba root is increasing.

Gambier growers have enjoyed particularly good prices in consequence of a war demand, and the interruption of supplies of rival materials such as valonia and quebracho, the first of which comes chiefly from Turkish possessions, and the second from South America to which, as said above, the steamer trade has suffered ^{reduction} considerably. So long as such prices are maintained the removal of it from the remote parts of Singapore island and the Territory of Malacca is improbable.

AGRICULTURAL INDUSTRIES.

The declaration of war in August, 1914, came when the prices of all Malayan agricultural exports had been falling for a long time; and its ~~first~~ effect was to send them lower but with skillful handling of the financial situation in London, local assurance of monetary help, ^{to producers} and the removal of enemy vessels from Eastern waters, an upward movement ~~was~~ started (November, 1914) which was still in progress when the year 1915 commenced. ^{But} This upward movement ceased to be general in March ^{known} ~~but~~ long before that month the planting interests of the Malay peninsula had found their fears of a want of market removed, although the conditions of trade were very complex. When the fear was on then there had been a very brief interruption of tapping on some rubber estates; and cerra making had been stopped ~~generally~~ generally.

In March, 1915, freight ~~rates~~ rates were greatly advanced, especially against the bulkier articles: by two steps those for the carriage to Europe of nutmegs, cloves, ginger, rubber, etc. were increased by 50%, those for sago or cerra by 72% ^{and} ~~or 75%~~ that for coconuts ~~rose~~ nearly 200%. These advances blocked certain outlets ^{left many} ~~which~~ war-restrictions had left open; their most serious effect being perhaps in the matter of cerra, the price of which from this cause ^{and from} ~~combined with~~ competition ^{with} ~~of~~ other sources of oil in a market where the crushing demand was

much restricted. The price of tapia followed suit.

But in the last quarter of the year a second general rise ^{occurred} ~~set in~~ carrying rubber far beyond expectation, and making the profit on copra and tapia again good.

With money thus coming in, there has been a small land-boom in Malacca, and in Singapore island an anxiety to get possession of and to cultivate whatever is still available. Further the gain has gone into making plantations cleaner ~~generally~~ than they were: it is not intended to state by this that they were generally foul, but that they are cleaner still than they were. ^{and for instance} Malacca estates ^{such as Die-hanous.} which used machinery ~~for cleaning~~ have found that they can afford the more costly manual digging. The greatest gain has come from the price of rubber; for which the Settlements are indebted to two circumstances - the war-demand and the prosperity of the United States of America, ~~which has~~ always been a great buyer of the commodity. And although the output has increased enormously, the whole has been absorbed at rising prices, making such a rosy prospect that it is rubber and nothing else that the majority of those who have been acquiring land desire to plant. While ~~adjoining~~ ^{new} fields have been cleared for the purpose, on the neighbouring ^{which} ~~productive~~ ^{new} areas, the small holder has resorted to tapping twice a day in order to get rich the faster.

At the commencement of 1915 Fine Hard Para stood at a considerable premium above Plantation Rubber as it had done persistently for the previous eighteen months; but the first rise in the value of Malayan produce made them ^{two rival} ~~Wilm~~ almost equal; and the second rise gave the premium, though small, to Plantation. It may be assumed that war conditions have been responsible for the advantage gained. But considerable changes have come about in the ways of marketing which are hoped to be of permanent benefit to Malaya. The foremost change has been the sweeping away of the London auctions, private treaty, spot and particularly forward, coming in; and concomitantly local ~~selling~~ ^{sales} have increased both in Singapore and in Penang. Large forward contracts between the producing estates and the manufacturer are equal to a certain amount of that standardisation of our produce which has been so much talked about but is still distant ^{awa} it has always been evident that standardisation would do much; ^{for Plantation} ~~and therefore~~ it is evident that the change in selling method which is equal to a part of it will do something.

The insistence of the war demand appears to have compelled many manufacturers to lay aside their aversion to buying Plantation, and further to have neutralised the power of the few strong and largely German houses on the Amazon to control prices through supply.

By means of the fresh planting in the Territory of Malacca the ~~area~~/~~the~~ increase of the area under rubber there will be not inconsiderable. Gambier, coconuts and tapioea are at the same time ^{become more} being restricted. In spite of the high price at which gambier stands there is no sign of an extension for it; and with the clearing away of unreserved forest for rubber the local supply of firewood for boiling it will still be less suffice. Coconuts are being cut out of mixed plantings. Tapioea occupies less land; but there exists a local interest in it in the Southern District which ^{is leading} ~~has been~~ to local planting. The rice land ^{has been} ~~appears to be~~ neither more extensively nor better cultivated than in the last few years, although some pressure has been brought to bear on the owners. They complain of the way in which the rainfall runs ^{away} ~~off~~ the land now that so much of the uplands have been cleared; and that much soil has been washed into the valleys is evident. It also appears that they make no attempt to adapt their tillage to the conditions.

Malacca's export of ginger has been doubled, apparently as a result of extended market garden cultivation. The export of area nuts has been above the average, a result of the excellent crop ^{consequently in} of 1914. These two products find their market within Asia. Pine-apples have been increasingly planted in Malacca; but there is not evidence of an increase of the cultivation of fruit trees. The yield of fruit was fair to good.

In Singapore island much of the land newly

broken up has been for market gardens; and at the height of the season vegetables were cheaper in Singapore town than they have been at any time since the rubber boom took the ^{Chinese} cultivators off their patches of land to work for the high wages of the estates. Some land has also been placed under pineapples to make good the removal of these from the numerous rubber estates. The small cultivator is able to make ~~some~~ profit from tuba root ^{in a large demand.} ~~for export.~~

The export of coconut oil has increased considerably, not so much from the crop which was good, as from an increase of crushing locally.

When war broke out, Penang's copra trade was most severely dislocated in consequence of the enormous proportion which used to go to enemy ports; but an adjustment has taken place ^{involving a considerable quantity} so that considering the smallness of the crop in the early part of the year the result is not unsatisfactory. In Penang also as in Singapore, there seems to have been an increase of oil making; and such would be the natural result of freights obstructing the export of copra.

Coconuts have been removed in Province Wellesley rather extensively for rubber.

Nutmegs are going out steadily; cloves more slowly. Puteh has found a market up and down the coast to ^{a small} ~~about the average amount~~ ^{by the fact that Europe is the primary market.} The rice crop of Penang and Province Wellesley was fair. Tapioca is still present in some quantity, but not sufficiently to maintain the poultry trade. Tapioca growing and poultry raising are together moving into Kedah; but the

raising of pigs seems to have been maintained.

For this purpose the area under Sagittaria near

Bukit Mertajam is not only maintained but increasing.

The fruit crop of 1935 was good.

My draft for C. paper 4/16

AGRICULTURE.

The war-demand for rubber, and the value and compactness of a cargo of rubber, as well as the certainty of a crop, have brought rubber-growing into still increasing favour. Established estates have prospered greatly; and estates which in 1914 were driven to various undesirable economies, have had funds for the highest cultivation. Much new land has been planted up with rubber trees in Malacca; throughout the three Settlements the coconut palms which have hitherto been intermixed with the rubber trees have been removed on considerable areas for the sake of the better growing of the latter.

Rubber prices on the London market varied as much as 100 per cent, but were always good. That form of rubber which was offered in lesser amount obtained the greatest premium,—Para over Plantation, and Crêpe over Sheet. Accordingly, no doubt, Crêpe would have been made in greater amount, but machinery was difficult to get: on the other hand, many small holdings, too small for elaborate machinery, which must perforce make sheet, have now come into bearing.

Coconut palms produced well, especially in Malacca and Penang; and the market offered better prices for copra than in 1915: but freights have been greatly against coconut produce. Areca palms which are generally productive when coconut palms are productive, in 1916 yielded well.

The nutmeg crop of Penang was small. The clove crop fair.

The rice crop of 1915-16 was good. That of 1916-17 was sown late, but on the whole over an undiminished area; and the promise is good.

Tapioca planting is stationary. Gambier is going out, by its removal from rubber estates.

The fruit crop in 1916 was heavier than in any recent year, and fruit was correspondingly cheap. But vegetable production has diminished, and Singapore has drawn supplies from unexpected quarters.

Knowledge, of pests and plant diseases has been increased. Within the Settlements no serious outbreaks have occurred. The locusts, which are a cause of some apprehension, enjoyed a good breeding year on the Malacca-Negri Sembilan-Johore borders, and for a time gained on the staff employed in their destruction. Their destruction is being organised by the Department of Agriculture of the Federated Malay States.

F32/37

Rubber-standardisation appears to have been brought materially nearer by the work of this Department.

F32/37

AGRICULTURE.

Rubber.—At the beginning of the year the price of plantation rubber was 2/3 per pound. It reached its highest point, 3/11, at the end of the year. Shipowners took advantage of these prices to raise the freight to Europe from 78/- per 50 cubic feet to 137/6. The profit that still, however, remains to the planter has been such as to create a demand for land that is straining the resources of the land officers. It is very noticeable too how much better the estates are maintained and clean-weeded than in the past, and how the importance of thinning out of trees is becoming realized.

The insistence of the war demand has helped "Plantation Rubber" in its rivalry with "Fine Hard Para." Manufacturers have been compelled to lay aside their aversion to trying "Plantation" and appear to be satisfied with the result of their trial. At the beginning of 1915 "Fine Hard Para" stood, as it had done persistently for the preceding eighteen months, at a considerable premium above "Plantation." Early in the year the two rivals drew level, and now plantation is leading—though the lead is small.

The establishment of a rubber market in Singapore and Penang has also helped plantation rubber. Large forward contracts between rubber estates and rubber manufacturers are now common, and in these days when standardization is still far distant are satisfactory to both parties as the buyer knows the seller's standard.

The direct sales of rubber to America have increased from 2,508 tons in 1913, to 4,510 tons in 1914, and 21,075 tons in 1915.

The total exports from the Colony amounted to 38,283 tons, of which 12,824 tons went to the United Kingdom, 1,998 tons to European countries, 1,230 tons to Japan, and 21,075 tons to the United States of America. Most of this, of course, is rubber imported from the Malay States and Netherlands Indies. Unfortunately there is no record of the amount of rubber actually obtained from the estates in the Colony.

Rice.—The Malay is giving up the hereditary cultivation of his race. It is sad, but with rubber and coconuts showing their present profits, it cannot be helped. From rice, a Malay might expect, if the season did not fail, to make with the united labour of his wife and family, a bare livelihood: a small rubber plantation yields him enough to make him a comparatively rich man; and instead of the dried fish and the cloth garment that were all that he could afford as a rice-grower, he eats imported rice and dresses himself and his family in silks. Such of the rice-fields as are not cultivated are lying fallow, and cultivation can be resumed when desired.

Coconuts.—Copra at the beginning of the year stood at \$8.90 (sundried): the maximum and minimum prices during the year were \$12.50 and \$7.00; and at the end of the year the price was \$10.75. The freight to Europe rose from 39/- per 12 cwt. to 100/-. The exports for the year were 77,381 tons, mostly to France and Denmark.

The oilmills in Singapore and Penang only supply the demands of the local markets, and little, if any, of their oil goes to Europe.

General.—Nutmegs are going out steadily: cloves more slowly. The fruit crop of 1915 was good in the north, but in Singapore not uniformly good. Areca-nuts have done well. Pineapples in Singapore have been abundant, the prices delivered at the Canneries falling as low as \$8 per 1,000.

Pests.—Parties of men were engaged throughout the year in Malacca upon locust-destruction, at a cost of \$9,317—as compared with \$4,081 in 1914.

It is believed that the measures taken have decreased their numbers considerably. The damage done by them to crops (rice and coconuts) has been very small. No other pest of cultivation has been unusually prevalent.

O.A.B.



Telegraphic Address:—

"SECRETARY, SINGAPORE."

Colonial Secretary's Office,

It is requested that the following number be quoted in the reply to this letter.

Singapore,

March, 1919.

No. 10651/18.

Sir,

I am directed to invite attention to my letter of even number dated 10th December, 1918, forwarding printed slips from last years Annual Report for amendment as required for the Annual Report on the Straits Settlements for 1918 and to request that this matter may receive your personal attention and the slips as amended be forwarded without delay.

I have the honour to be,

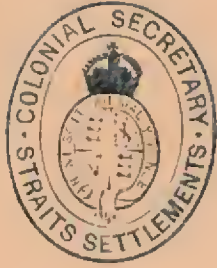
Sir,

Your obedient servant,

38. H. H. H.
Colonial Secretary,
Straits Settlements.

The Director of Gardens,
Straits Settlements,
S I N G A P O R E.

M.T.



Telegraphic Address:—

"SECRETARY, SINGAPORE."

It is requested that the following number be quoted in the reply to this letter.

Colonial Secretary's Office,

Singapore, 10th December, 1918.

No. 10651/18.

Annual Report on the Straits Settlements.

Sir,

I am directed to request that you will make the necessary corrections for the year 1918 in the attached printed return relating to Agriculture and send them to this office when corrected.

2. The information is required for the Annual Blue Book Report of the Colony and must be accurate. Care should be taken that any alteration of figures in one part of the Report is carried out throughout that Report.

3. The Annual Report has, by direction of the Secretary of State, to reach him not later than the end of May. The enclosed Return should therefore be sent in as early as possible after the close of the current year, and in any case by the end of February. If in any instance final figures cannot be given an approximate estimate should be made, reasons being given.

4. I am to request you to give your personal attention to this matter and to treat it as important.

I have the honour to be,

Sir,

Your obedient servant,

Albion
Colonial Secretary,
Straits Settlements.

The Director of Gardens,
Straits Settlements,

F32/40 SINGAPORE.

F32/40

AGRICULTURAL INDUSTRIES.

During 1918 the inefficiency of shipping resulted in the accumulation of large stocks of produce in our ports; ^{after that} and in the congestion spreading back in the case of rubber to the estates which were driven to sell without delivery. Low prices under such circumstances were inevitable; and rubber realised ^{locally} on the average 40 % less than in 1917. At the same time, with the great increase in the price of rice, the cost of production was driven up, ^{consequently} and profits were clipped at both ends.

The rubber industry, indeed, passed through a crisis, and rubber was sold ^{what it had} ~~at~~ below ~~the~~ cost to produce.

In consequence of voluntary reduction of output in anti-
 cipation of the ~~crisis~~ ^{crisis} upon well established estates, and by ~~means~~ ^{means}
~~that of enforced reduction~~ later on ~~on~~ ^{on} less firmly established estates, ~~to~~
 this inability to ~~to~~ ^{to} at a profit, the total output of the Settlements means
 to have been about 75 % of what was possible.

Fortunately the crisis lasted but a short time; and at the end of the year prices were again at a paying level.

The estates have been maintained in a good condition and are much improved upon what they were after the crisis of 1913. The trees are generally healthy.

Copra prices, calculated in cents, were a little better than in 1917: but if the higher cost of production be taken into consideration, they were not so. Copra is not being manufactured at all in Singapore island: and the production is upon a reduced scale in the other Settlements. The end of the year found large stocks held; and the London market at a figure which did not permit of sale there. Fortunately local milling was active, and absorbed an increased amount of copra. Upon the oil relies a nascent local soap industry.

The plantations are generally healthy.

Combier persists only over very small areas. West of Fuel

for boiling is killing it.

Tapioca production has increased in Malacca, with the use of the Tapioca plant, as before, for a cover crop in young rubber. The amount of it in Penang, and in Province Wellesley is also larger than it was before 1917.

Swine rearing and fattening is in Malaya an industry large^{refuse} dependant upon the ~~amount~~ of such industries as tapioca: but it has not returned to Malacca yet. Instead the export of poultry thence into the interior has again increased. Swine fattening, that is to say the importation of lean pigs and the feeding of them seems to offer in Singapore profits of about 30%: but as large is the local consumption of pork that Singapore has no ~~surplus~~ ^{surplus} export ~~surplus~~, and the surplus in Penang has dwindled down from 20,000 head in 1914 to barely over 1,000. Penang has now no surplus of poultry to export. It seems that one cause of this is that the mills in Penang do their work more efficiently than formerly so that there is less waste to ^{pig or poultry} ~~be~~ to ~~human~~ feeding.

Vegetable production appears to be increased in Penang; but to have decreased slightly in Malacca. In Malacca also ginger growing has decreased slightly. This decrease seems to be due to the ^{rubber} ~~rubber~~ estates demanding Chinese tappers, and may be looked on as a phase ^{may} that ~~will~~ pass ~~when~~ if the estates are able to keep adequate forces of Tamil tappers.

The year was a good one for fruit everywhere. There were also good crops of nutmegs and cloves in Penang: but the Penang nutmeg industry has ~~decayed~~ decayed badly, and the clove industry is suffering also. The clove & nutmeg-areas and gardens are nearly all planted through with rubber which can hardly be expected

to pay. The export of Areca nuts from Penang has also decreased: the prices are slightly better than in 1917; but perhaps not sufficiently to compensate for the greater cost of harvesting and drying.

Rice in the 1917-18 crop was excellent and the rice lands were very fully planted; but the crop of the season 1918-19 is disappointing. In some places as the coastal lands of Malacca and parts of Province Wellesley it is excellent. In other parts it was planted too late and in the interior of Malacca there are some hundreds of acres without any crop at all, in consequence of the cultivators waiting for rain which did not come.